ECHINOIDEA

BY

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COPENHAGEN

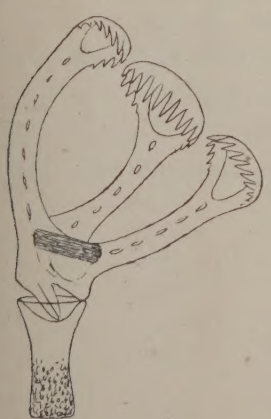
Pourtalesia miranda A. Agassiz

erial: St. 371 (Haul No. 10), N 24° 12′ 63° 23′—N 24° 28′ W 63° 18′, Aug. 20th 8; depth 5,850—5,860 m.

om haul No. 10 there are some miserable ents of an Echinoid, which can, however, dentified with certainty as *Pourtalesia da* A. Agassiz. The highly characteristic ephalous pedicellariae alone would suffice ie identification (Fig. 1); but one of the ents shows the low keel on the posterior of the dorsal side, likewise characteristic s species, cf. Pl. V, Fig. 4 of the Echinoidea e »Ingolf» Expedition, Part II — there d *Pourtalesia Wandeli* Mrtsn. It is main- d by H. L. Clark that this *P. Wandeli* is ical with *P. miranda*. The matter is tful, cf. p. 144—145 of my Monograph e Echinoidea, Vol. V, Part I.

miranda is distributed over the Northern tic from off the Faroes to the Davis t and the West Indies.

e fragments obtained by the Swedish



. *Pourtalesia miranda* A. Agassiz. Ophicephalous pedicellaria of specimen from Stat. 371. × 100.

Deep-Sea Expedition represent the record depth at which any Echinoid has been taken. Up till now the greatest depth at which an Echinoid had been taken was 5,200 m, namely *Aëropsis fulva* A. Agassiz (off the Peruvian coast, U. S. »Albatross» St. 4672). But several other Echinoids have been taken at depths of between 4,000 and 5,000 m, e. g. *Kamptosoma asterias* (A. Agassiz) (4,950 m), *Calymne relicta* Wyv. Thomson (4,846 m), *Aceste ovata* A. Agassiz & H. L. Clark (4,755 m), and *Homolampas fulva* A. Agassiz (4,500 m).

It appears that none of them are confined to depths of below 4,000 m or more. Thus the species recorded from the greatest depth, *Pourtalesia miranda*, is known to occur at a depth as shallow as 640 m, and *Aceste ovata* at a depth as shallow as 435 m. In general it may well be said that the meridosternous Echinoids (the Pourtalesiids and Urechinids) particularly are inhabitants of the great depths, but many other Echinoids — various Cidarids, Echinothurids, Salenids, Spatangoids — are likewise more or less exclusively deep-sea dwellers. Our knowledge of the fauna of the greatest ocean depths is, however, still very fragmentary. Results of the greatest interest and importance may be expected from extensive researches into the fauna of the great depths of the ocean.

List of Echinoids the bathymetrical distribution of which extends to or beyond 3,000 metres

Aporocidaris Milleri
(A. Agassiz) ..... 3,010—3,875 m.

Aporocidaris fragilis
A. Agassiz & H. L. Clark 2,800—3,550 m.

Hemiphormosoma paucispinum MRTSN ..... 4,095 m.
Tromikosoma tenue (A. AGASSIZ) ..... 1,530—3,375 m.
Tromikosoma australe (KOEHLER) ..... 3,240 m.
Tromikosoma panamense (A. AGASSIZ) ..... 2,380—3,285 m.
Kamptosoma asterias (A. AGASSIZ) ..... 3,890—4,950 m.
Salenocidaris profundi (DUNCAN) ..... 1,700—3,120 m.
Salenocidaris miliaris (A. AGASSIZ) ..... 1,200—3,000 m.
Dialithocidaris gemmifera A. AGASSIZ ..... 3,255 m.
Plesiodiadema microtuberculatum (A. AGASSIZ) ..... 3,645 m.
Plesiodiadema antillarum (A. AGASSIZ) ..... 750—3,000 m.
Plesiodiadema globulosum (A. AGASSIZ) ..... 2,830—3,900 m.
Plesiodiadema horridum (A. AGASSIZ) ..... 1,625—3,190 m.
Plesiodiadema molle DÖDERLEIN ..... 2,900—3,385 m.
Prionechinus Agassizi WOOD-MASON & ALCOCK ..... 420—3 310 m.
Echinus Alexandri DANIELSSEN & KOREN ..... 365—3 120 m.
Urechinus naresianus WYV. THOMSON ..... 775—3,520 m.
Urechinus Loveni (A. AGASSIZ) 3,330—3,710 m.
Urechinus Wyvillei (A. AGASSIZ) ..... 2,515—3,840 m.
Urechinus clypeatus (A. AGASSIZ) ..... 3,475—3,500 m.
Urechinus Drygalskii MRTSN 3,
Pilematechinus Rathbuni (A. AGASSIZ) ..... 3,150—3,
Pilematechinus vesica (A. AGASSIZ) 4,
Plexechinus spectabilis MRTSN 4,
Delopatagus Brucei KOEHLER 4,
Calymne relicta WYV. THOMSON 1,130—4,
Spatagocystis Challengeri A. AGASSIZ ..... 2,925—3,
Cystocrepis setigera (A. AGASSIZ) ..... 2,875—3,
Ceratophysa ceratopyga (A. AGASSIZ) ..... 3,565—4,
Ceratophysa rosea (A. AGASSIZ) 4,
Helgocystis carinata (A. AGASSIZ) ..... 2,925—4,
Pourtalesia miranda A. AGASSIZ ..... 640—5,
Pourtalesia hispida A. AGASSIZ ..... 2,925—3,
Echinosigra phiale (WYV. THOMSON) ..... 1,545—3,
Aeropsis rostrata (WYV. THOMSON) ..... 2,550—3,
Aeropsis fulva (A. AGASSIZ) .. 1,455—5,
Aceste bellidifera WYV. THOMSON ..... 1,135—4,
Aceste ovata A. AGASSIZ & H. L. CLARK ..... 435—4
Genicopatagus affinis A. AGASSIZ 3
Homolampas fulva A. AGASSIZ 3,665—4
Homolampas fragilis (A. AGASSIZ) ..... 400—3
Hemiaster expergitus LOVÉN .. 950—3